5-4/5-5   Fractions in Simplest Form and Greatest Common Factor:
The Ladder Day 2

Objective: to learn to express (name) fractions in simplest form.

Fraction: A number describing part of a whole when the whole is cut into equal pieces.

Denominator: the bottom number in a fraction; it tells how many equal parts one whole is divided into.

Numerator: The top number in a fraction; it tells how many parts you have or are talking about.

Equivalent Fractions: Two fractions naming the same amount.

Simplest Form: the name used when the greatest common factor of the numerator and denominator is the factor of "1."

Greatest Common Factor: the largest whole number which evenly divides both the numerator and the denominator.

To solve for simplest form we used to:

♣♣ To change a fraction to lowest/simplest terms, you must divide both numerator *and* denominator evenly by the same number. Use your divisibility rules and your **EMERGING NUMBER FLUENCY** to find common factors. Using the GCF will simplify the process.

EX #1: Write $\dfrac{24}{60}$ in lowest terms: Reduce by common factors until the GCF of the numerator and denominator is 1. That's when a fraction is in its lowest terms.

First, $\dfrac{24}{60} \div 4 = \dfrac{24 \div 4}{60 \div 4} = \dfrac{6}{15}$; then $\dfrac{6 \div 3}{15 \div 3} = \dfrac{2}{5}$ $\boxed{\dfrac{2}{5} \text{ is in lowest terms}}$

Let's Use the Ladder for LCM, GCF and Simplifying Fractions!
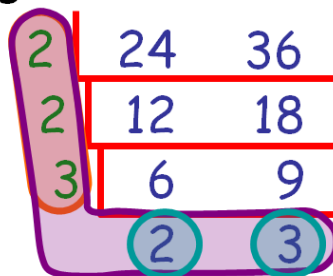
❶ WRITE the two numbers on one line.

❷ DRAW THE L SHAPE

❸ DIVIDE out common prime numbers starting with the smallest

2	24	36
2	12	18
3	6	9
	②	③

❹ LCM makes an L: LCM = 2 • 2 • 3 • 2 • 3 = 72

GCF is down the left side: GCF = 2 • 2 • 3 = 12

Simplified fraction is on the bottom $\dfrac{24}{36} = \dfrac{2}{3}$

Let's try one together: Find the GCF and write this fraction in its simplest form: $\dfrac{12}{96}$

1. **WRITE** the two numbers on one line, making sure the numerator is on the left and the denominator is on the right

2. **DRAW THE L SHAPE**

3. **DIVIDE** out common prime numbers starting with the smallest

4.   **GCF** is the product of the numbers on the left side   GCF =

5. **Simplified fraction** is on the bottom:

a) **Find the GCF and write this fraction in its simplest form:** $\dfrac{45}{75}$

1. **WRITE** the two
   numbers on one line, making sure
   the numerator is on the left and
   the denominator is on the right

2. **DRAW THE L SHAPE**

3. **DIVIDE** out common
   prime numbers starting
   with the smallest

4. **GCF** is the product of the numbers on the left side   GCF =

5. **Simplified fraction** is on the bottom:

b) **Find the GCF and write this fraction in its simplest form:** $\dfrac{240}{280}$

1. **WRITE** the two
numbers on one line, making sure
the numerator is on the left and
the denominator is on the right

2. **DRAW THE L SHAPE**

3. **DIVIDE** out common
prime numbers starting
with the smallest

4. **GCF** is the product of the numbers on the left side   GCF =

5. **Simplified fraction** is on the bottom: